

### **REMARKS**

Claims 54-64 and 75-85 are pending in the application and stand rejected. There are no claim amendments. Claims 54-64 and 75-85 remain pending.

### **REJECTIONS WITHDRAWN**

Applicants appreciate that all of the 35 U.S.C. §102, §103 and the double patenting rejections in the non-final rejection of October 12, 2006 have been withdrawn. Applicants address the new rejections below.

### **REJECTIONS UNDER 35 U.S.C. § 103**

Claims 50-66, 60-61 and 75-79 are rejected as obvious over the Bonk reference (U.S. Pat. No. 6,203,868) in view of the Camilleri reference (U.S. Pat. No. 3,718,622). Applicants respectfully traverse the rejection and request reconsideration.

The Camilleri patent does not make up for the deficiencies of the Bonk patent, as applied to these claims. As noted in the Office Action, the Bonk patent is devoid of any suggestion to use a gel reducing additive in its flexible layer made of a mix of thermoplastic urethane (tpu) and hydroxyl functional polymer. The Camilleri patent does not provide that suggestion. To understand why, a brief explanation of the claimed invention is helpful.

The rejected claims recite a low gel sheet formed from a blend of tpu, a hydroxyl functional co-polymer, and a gel reducing additive. The claims further recite that the gel reducing additive is present in a range of 0.05% to 20% by weight of the blend. The latter range of gel reducing additive was added to the claims in order to distinguish over cited art that involved a polyurethane polymer polymerized from a reaction mixture containing ethylene glycol as a chain transfer agent. In earlier prosecution, applicants argued that such a polyurethane would contain less than trace amounts of the ethylene glycol, as it would completely react with any isocyanate present in the starting materials. The Examiner took the position that there would nevertheless be at least one molecule of ethylene glycol in such a reaction mixture, and that without a recitation of macro amounts of ethylene glycol as in the current claims, the art would anticipate those claims. Thus, the current claims recite a composition containing significantly more of the “gel reducing additive” than is left over from polymerizing isocyanates in the presence of ethylene glycol to make a polyurethane. The gel

reducing additive is present in a composition along with a polyurethane and a hydroxyl functional polymer.

The Camilleri reference teaches reacting isocyanates with polyols in the presence of ethylene glycol to reduce gel in the polyurethane formed. It is thus like the cited art discussed above, in that it discloses the presence of glycol in a composition to react with one of the components of the composition. As discussed in the reference, the resulting polyurethanes are low in gel because, as pointed out in column 3, the additive reacts with unreacted isocyanate groups to eliminate them from the product and prevent their subsequent reaction with atmospheric moisture or other chain extending reactions. Thus, the reference teaches the process of combining isocyanate functional compounds, compounds with organic groups reactive with those isocyanate groups, and the high molecular weight compound having a primary or secondary hydroxyl group. *See* column 1, lines 59-67.

With the references properly understood, the Applicants respectfully submit that there is no motivation whatever to add a “gel reducing additive”, such as disclosed in the Camilleri reference, to the Bonk compositions, which recite a blend of thermoplastic polyurethane and hydroxyl functional polymer. The “gel reducing additive” in Camilleri is designed to react with a component of its composition. It is present in the compositions of the Camilleri reference in order to be consumed during subsequent reaction to form a polyurethane. There is no apparent reason to add the gel reducing additive taught by Camilleri to a composition such as Bonk’s that already contains a formed polyurethane. Applicants speculate at paragraph 0022 that the gel reducing additive of the claims works by reacting preferentially with regenerated isocyanate groups formed during dissociation of the tpu in the presence of the hydroxyl functional polymer. But their insight into the mechanism is not prior art, and can provide no proper motivation for the combination of the references.

For the reasons discussed above, Applicants respectfully submit the combination as suggested in the Office Action is improper, for the reason that any motivation for it is to be found only with the benefit of hindsight based on their disclosure. Accordingly, Applicants respectfully request the rejection be withdrawn.

Claims 57-59 and 80-82 are rejected as obvious over the combination of the Bonk ‘868 reference and the Camilleri reference as applied above and further in view of the Bonk ‘026 reference (6127026). The deficiencies of the combined references are discussed above. The

Bonk '026 reference does not overcome those deficiencies. Accordingly, Applicants respectfully traverse the rejection and request that the rejection be withdrawn.

Claims 62, 64, 83 and 85 are rejected over the combined references in further view of the Meyer reference (US 4999213). Because the Meyer reference does not make up for the deficiencies of the combined references, as discussed above, Applicants respectfully traverse the rejection and request it be withdrawn.

Claims 63-84 are likewise rejected as obvious over the combined references and further view of the Cook reference (US 4156768). Because the Cook reference does not make up for the deficiencies of the combined references as discussed above, Applicants respectfully traverse the rejection and request it be withdrawn.

#### **DOUBLE PATENTING**

Claims 54-64 and 75-85 are provisionally rejected under non-statutory obviousness-type double patenting as unpatentable over claims 28-54 of co-pending application 10/633,764 in view of the Camilleri reference. Applicants respectfully traverse the rejection and request reconsideration.

For the same reasons as discussed above with respect to the §103 rejections, Applicants respectfully submit that the Camilleri reference does not make it obvious to add a gel reducing additive to a composition comprising a thermoplastic urethane and a hydroxyl functional polymer as in the current claims. In addition, the co-pending claims recite laminar nanofillers not present in the currently rejected claims. For these reasons, Applicants respectfully submit that the current claims are not obvious over the claims of co-pending 10/633,764, and respectfully request that the rejection be withdrawn.

## CONCLUSION

For the reasons discussed above, applicants believe claims 54-64 and 75-85 patentably distinguish over the cited art of record, and respectfully request an early Notice of Allowance. The Examiner is invited to telephone the undersigned if that would be helpful to resolve any issues.

Respectfully submitted,

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